Patent Application Attorney Docket No.: H0005791

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ABSTRACT OF THE DISCLOSURE

An apparatus and method for combining the functionality of multiple airborne traffic surveillance systems that operate in the L-band frequency range. The apparatus and method combine the functionality of both a Traffic Alert Collision Avoidance System (TCAS) and a Mode-Select (Mode-S) transponder in an integrated L-band traffic surveillance apparatus having a single processor that is embodied in a single Line Replaceable Unit.